

## METHOD AND APPARATUS FOR REDUCING GAS TURBINE ENGINE EMISSIONS

### ABSTRACT

[0050] A low emission turbine includes a reverse flow can-type combustor that generally includes a primary and secondary fuel delivery system that can be independently controlled to produce low CO, UHC, and NO<sub>x</sub> emissions at design set point and at conditions other than design set point. The reverse flow can-type combustor generally includes an annularly arranged array of swirler and mixer assemblies within the combustor, wherein each swirler and mixer in the array includes a primary and secondary fuel delivery system that can be independently controlled. Also disclosed herein is a can-type combustor that includes fluid passageways that perpendicularly impinge the backside of a heat shield. Processes for operating the can-type combustors are also disclosed.